DOCUMENT RESUME

ED 050 484 EA 003 510

AUTHOR Sommerville, Joseph C.
TITLE An Analysis of Certain Interpersonal Aspects of the Home and School in Low Socioeconomic Areas Relating to Student Achievement.
PUB DATE [70]
NOTE 12p.

EDRS PRICE EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS *Academic Achievement, Communication Skills, *Economic Disadvantagement, *Family Environment, Grade 6, High Achievers, *Interpersonal Relationship, Language Development, Low Achievers, Mental Development, *Self Concept

ABSTRACT

This article summarizes an investigation of factors manifested by 6th grade students in four Detroit metropolitan area schools who achieved on the Iowa Test of Basic Skills at levels significantly above and below the average. The study sample consisted of 80 students with scores divided equally above and below the average. Instruments measured students' self-esteem, a questionnaire assessed the nature of selected background experiences, and the California Test of Mental Maturity provided mental maturity factors. The results imply a significant relationship between home environment and achievement level of students. (Author/MLF)

ED050484

An Analysis of Certain Interpersonal Aspects of the Home and School in Low Socioeconomic Areas Relating to Student Achievement

Joseph C. Sommerville

The University of Toledo

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Introduction

There has been much discussion and an indication of some deep concern about the achievement level of students from low socio-economic areas. The mounting attention given to the students from those areas is evident by the passage of the Elementary and Secondary Education Act of 1965, the Economic Opportunity Act of 1964, and the thrust of the Civil Rights movement, which in most instances tend to be focused in this area. As an educator who has experienced many years as a student, teacher, and administrator in schools which are in the low socio-economic category, I too have had and continue to have a deep concern and interest in factors which play a vital role in the process of achievement and a feeling of individual worth on the part of the students.

Clifford and Wattenburg (1964), Hamachek (1960) and Roth (1959) are but a few of the many researchers who have found positive correlation between achievement and self-concept. Bernstein (1960), Ballachey, et. al. (1962) and Sommerville (1969) discuss the child's socio-economic status as a relevant factor in his language development indicating a positive relationship between his background of experiences and his academic achievement, school environment, and/or self-perceptions.

---

[1]The data collection and many of the analyses for this paper were completed while Dr. Sommerville was associated with the University of Michigan as a graduate student. The author would like to acknowledge the assistance of Dr. Lowell W. Beach, Assistant Dean of School of Education University of Michigan, who served as the primary advisor throughout the research project.

EA 003 510

This article is essentially a summary of an investigation of some factors that are manifested in students who achieved on the Iowa Test of Basic Skills at Levels which are significantly above and below the average in four "target schools" of a school system in the Detroit Metropolitan area. These schools were chosen for this study because of their similarities and the high interest in providing improved educational opportunities for students from this strata of our society. They have qualified as "target area schools" according to the criteria for receiving federal assistance under Title I of the provisions of the Elementary and Secondary Act of 1965.

The problem for the study may be stated rather succinctly as: Do the sixth grade students in the "target area schools" who score significantly above the school's mean achievement level have a wider and more varied background of experiences than and exhibit significantly different self-esteem and mental maturity factors from those students who score below that average? It was hypothesized that students in the "target area schools" who achieve significantly above the achievement level norm have a wider and more varied background of experiences, exhibit higher self-concepts, mental maturity factors, and significantly different social, home, and school self-esteem.

Method

Though all sixth grade students in the "target area schools" were involved in the testing, only the 215 or 92% who completed all tests were used as the parent population for the study. The mean achievement level for the "target area schools" was 52.6. In order to eliminate the students who scored within average range and select only those who scored above and below, three standard errors of Measurement Grade Equivalent Units were added to and substracted from the mean grade equivalent score respectively. Since 86 students scored above and 46 below the range score

respectively, a table of random numbers was used to select an equal number of students who scored significantly above and below the average. Thus the sample on which this study is based consists of forty students who scored above 57.3 and forty students who scored below 47.9 on the Iowa Test of Basic Skills.

The Coopersmith Self-Esteem Inventory (Coopersmith 1959) was used to assess self-concept. The instrument provided measurements of the student self-esteem as indicated by the following scales: home, self, social, lie, and school. The lie subscale is used only as an indicator of the validity of the individual test.

A student questionnaire designed to assess the nature of selected background experiences was also administered. The questionnaire consisted of 25 experiential background questions which were perceived by the researcher to be related to achievement based on his experiences, conferences with educators, a review of the literature with focus on the "disadvantaged," field tests,and other resources.

A chi-square contingency test was used to test the significance of the difference between the high and low achievers in the distribution of self-esteem inventory scores. The test was also used in determining whether significant differences existed between the two groups of students in measures of self-esteem on the self, social, home, lie, and school sub-tests. The significance of differences between the high and low achievers responses with regard to their background of experiences was also measured by the chi- square contingency test.

Results

The distribution of high and low scores on the self-esteem inventory tended to indicate that higher achievers showed a slightly higher perception of themselves than the low achievers. Seventeen out of thirty-eight high

achieving students scored above the mean while only four out of thirty-eight low achieving students reached that level. The scores of two students in the high achieving group and two students in the low achieving group exceeded the arbitrary threshold on the lie scales. Scores of these four students were ruled invalid and not utilized in the study.

The subtest scores of each the high and low achievers were categorized according to the range of scores into three classes: above average, average, and below average. The computed X^2 values for the entire self-esteem inventory and the five sub-scale scores are listed in Table 1.

The significance of these results was determined utilizing two degrees of freedom. Fisher's table of X^2 reveals that the results are significant at the .05 level if the X^2 value exceeds 5.99. A further comparison shows that the home is significant at the .01 level.

A twenty-five item questionnaire about the nature and quantity of home, community, and travel experiences of students in both the high and low achieving groups was administered. Significant differences between the high and low achievers were found in only five out of the twenty-five questions. The most highly significant differences between the responses were noted in questions relating to experiences which required time and patience of the parents. The question: "Do your parents listen to what you want to talk about?" provided the clue to the nature of the relationships that exist between the children and their parents.

An analysis of student responses to the California Test of Mental Maturity, the Students Questionnaire and the Coopersmith Self-Esteem Inventory comparing the low and high achievers based on the results of the Iowa Test of Basic Skills provided some basis for the conclusion and implications. Generally there was no significant difference between the California Test of Mental

TABLE I

COMPUTED X^2 VALUE FOR ENTIRE SCORES AND FIVE SUB-SCALES SCORES

TEST	X^2 VALUE
Entire self-esteem	6.86*
Self sub-scale	5.28
Social self-esteem	1.65
Home self-esteem	12.20**
Lie self-esteem	1.56
School self-esteem	5.36

*Significant at the .05 level. **Significant at the .01 level.

Maturity language and non-language scores of either the high or low achieving groups. The high achievers had language and non-language mean scores of 108 and 107 respectively and the low achievers scored a mean 88 in both the language and non-language portions of the test.

Further analysis of mental maturity factors included the isolation of students who had an I.Q. within the range of 90-110. There were 17 students in the high and 16 in the low group of achievers who had I.Q.'s within this category. Students in the high and low achieving groups who had a total I.Q. within the range of 90-110 were compared in the following areas:

1. Self-esteem including all sub-scale inventories.
2. Background of experiences as measured by the student questionnaires.
3. Differences in the language mean I.Q.'s

The results of the Self-Esteem Inventory for sub-groups were tabulated and analyzed in each area. The computed chi-square values of the responses of the high and low achievers with equivalent I.Q.'s are shown in Table 2.

After limiting the I.Q. range of the high and low achievers to the range between 90-110, the high achievers had a mean language score of 106 and a non-language score of 97; the low achievers had a mean language score of 95 and a non-language score of 106. The observable differences in language and non-language scores of the low and high achievers were tested for significancy between the sample mans. A test of significance was completed for each group.

The results of the test of significance for differences between the language and non-language I.Q.'s of the high and low achievers appear in Table 3.

TABLE 2

COMPUTED VALUE OF X^2 FOR SELF-ESTEEM INVENTORY OF SUB-GROUPS

Self	1.28
Social	.49
Home	7.8*
Lie	.14
School	7.8*
Total Score	4.8*

*The values of X^2 which equaled or exceeded 3.8 are significant at the .05 level; those which equaled or exceeded 6.6 are significant at the .01 level.

TABLE 3

COMPUTED T TEST FOR DIFFERENCES IN LANGUAGE AND NON-LANGUAGE I.Q. OF SUB-SAMPLE

High Achievers	-t=2.67	32 degrees of freedom
Low Achievers	-t=3.9	30 degrees of freedom

The t .05 value at 30 degrees of freedom is 2.042 and t .05 value at 32 degrees of freedom is 1.959. Thus, the difference in the language and non-language I.Q. of each of the low and high achievers is significant.

The alternate distribution of the differences in the mean score of the low achievers which was high in non-language skills while high achievers scores were significantly higher in language skills is worthy of note. The implications here are that there exists a positive correlation between the language I.Q. and achievement. The difference in language and non-language results is understandable when one considers that the communication skills are of great importance on the Iowa Test of Basic Skills.

Discussion

It is extremely important to note the differences in the nature of the experiences of the two groups. Most questions in which there were significant differences in responses between the high and low achievers had some relationship to communication skill development and implicated a need for a healthy relationship between the child and his parents. This was true though there was not overwhelming evidence that students who are high achievers had wider and more varied experiences than those students who are low achievers. Considered as a separate entity, these findings may be minimized. However, in observing the questions on which there were significant differences and those which displayed a trend toward significance, the importance of these findings increases.

The responses to school self-esteem which exhibited a strong trend toward significance in the main sample of high and low achievers became highly significant when intelligence quotients were equivalent. Students exhibited no important differences between their social and self-esteem when considered as individual tests. However, the total self-esteem score which included these tests, is significantly higher for the students who achieve at the higher level.

In summary, this study implies a significant relationship between the home and the achievement level of students. The inter-relationship between the nature and weight of certain responses in this study and the steps in the sequential development of communication skills is quite clear. The role language development plays in achievement is evident in each of the significant differences found between the low and high achievers.

The nature and character of the experiences students have are implicated as an important variable in this study. Students in the low socio-economic segment of our society must have experiences which enhance rather than inhibit language development. These experiences must be cultivated to some extent in the home. The home as well as the school must develop relationships which encourage language development, creativity, self-confidence and self-expression. Parents who apparently encouraged the children to have a degree of freedom of expression, self-reliance and pride in one's individuality were substantially greater in number among the high achievers than those of the low achievers.

There appears to be a great interest in and federal as well as local support for providing children from low income families with experiences similar to those enjoyed by students of middle income families such as visits to museums, farms, parks and other sites of interest. The value of such experiences in upgrading school achievement is questionable unless there is a similar effort to improve the interpersonal interaction within the school and home. It is generally assumed that these experiences will enhance the development of the child to achieve at a level comparable to his potential. However, there appears to be a significant factor missing in these experiences when considered in relationship to the findings in this study. This factor deals with the development of a relationship between the parent and the child which promotes language development,

self-experssion, and a feeling of individual worth. If programs developed to improve student achievement are to be effective in low socio-economic areas, the inclusion of a plan to improve the interpersonal aspects of the students' home and school life is highly recommended.

References

Ballachey, Egerton L., Crutchfield, Richard, and Krech, David. Individual in Society. New York: McGraw-Hill Company, Inc. 1962, 276-375.

Bernstein, B. "Language and Social Class," British Journal of Sociology, XI (1960), 271-276.

Clifford, Clare and Wattenburg, William W. "Relation of Self Concepts to Beginning Achievement in Reading," Child Development, XXXV (1964), 461-7.

Coopersmith, Stanley. "A Method of Determining Tyeps of Self Esteem," Journal of Abnormal Social Psychology, LIX (1959), 87-94.

Hamachek, D. E. "A Study of the Relationship Between Certain Measures of Growth and the Self-Images of Elementary School Children," Unpublished Ph.D. dissertation, University of Michigan, 1960.

Roth, Robert M. "The Role of Self-Concept in Achievement," Journal of Experimental Education, XXVII, (1959), 265-281.

Sommerville, Joseph C. "An Investigation of the Relationship Between the School Organizational Climate and Self-Concept, Level of Aspiration, Attitude and Opinion of Students About School," Unpublished Ph.D. dissertation, The University of Michigan, 1969.